

R E M A R K S

Reconsideration of this application, as amended, is respectfully requested.

ALLOWABLE SUBJECT MATTER

The Examiner's indication of the allowability of the subject matter of claims 31-33 and 36-38 is respectfully acknowledged. These claims, however, have not been rewritten in independent form at this time since, as set forth in detail hereinbelow, it is respectfully submitted that their respective parent claims 30 and 35 also recite allowable subject matter.

THE SPECIFICATION

The specification has been amended to correct some minor informalities of which the undersigned has become aware, including all of the informalities pointed out by the Examiner. No new matter has been added, and it is respectfully requested that the amendments to the specification be approved and entered, and that the objection to the specification be withdrawn.

THE CLAIMS

The claims have been amended only to make some minor grammatical improvements and to correct some minor antecedent basis problems so as to put them in better form for issuance in a

U.S. patent. In particular, it is noted that claims 31, 32, 36 and 37 have been amended to correct the informalities pointed out by the Examiner on pages 3 and 4 of the Office Action so as to overcome the rejection under 35 USC 112, second paragraph. No new matter has been added, and it is respectfully requested that the amendments to the claims be approved and entered, and that the rejection under 35 USC 112, second paragraph, be withdrawn.

It is respectfully submitted, moreover, that the amendments to the claims are not related to patentability, and do not narrow the scope of the claims either literally or under the doctrine of equivalents.

THE PRIOR ART REJECTION

Claims 30, 34, 35 and 39 were rejected under 35 USC 102 as being anticipated by USP 6,964,480 ("Levine"). This rejection, however, is respectfully traversed.

According to the present invention as recited in independent claim 30, an ophthalmologic instrument is provided for measuring aberrations of a human eye. As recited in clarified amended independent claim 30, the instrument comprises a point light source which is projected onto a retina of the eye to create a virtual light source thereon, wherein radiation of the virtual light source is scattered by the retina and then passes through optical systems of the eye and becomes

phase-modulated, and wherein the modulation corresponds to a total of optical aberrations of the eye. In addition, as recited in clarified amended independent claim 30, a measuring system is provided for measuring a shape of a wavefront of the radiation leaving the eye, and outputting an output signal to a control system of the instrument. Still further, as recited in clarified amended independent claim 30, a system for compensating for the aberrations is provided, located between the eye and the measuring system and transmitting the radiation leaving the eye, wherein the system comprises a refraction compensator that controls focusing of the radiation scattered by the retina and an astigmatism compensator located at an image plane of a pupil of the eye. Yet still further, as recited in clarified amended claim 30, a projector of test patterns, jointly with the refraction compensator and the astigmatism compensator, projects an image of a test pattern onto the retina.

Independent claim 35, moreover, recites an ophthalmologic instrument having essentially the same features as the ophthalmologic instrument of independent claim 30 and further comprising a compensator of high-order aberrations.

Thus, according to the present invention as recited in each of clarified amended independent claims 30 and 35, an ophthalmologic instrument is provided which comprises a system for compensating for aberrations, located between the eye and the

measuring system and transmitting the radiation leaving the eye, wherein the system comprises a refraction compensator that controls focusing of the radiation scattered by the retina, and an astigmatism compensator located at an image plane of a pupil of the eye (and as recited in claim 35 a compensator of high-order aberrations). And according to the present invention as recited in clarified amended independent claims 30 and 35, a projector of patterns, jointly with the compensators, projects an image of a test pattern onto the retina.

On page 5 of the Office Action, the Examiner asserts that Levine discloses the above described feature of the projector as according to the present invention as recited in independent claims 30 and 35. In particular, the Examiner asserts that the fixation target 71 of Levine corresponds to a "test pattern" as according to the claimed present invention. Applicant respectfully disagrees.

According to Levine, an image of an internal fixation target is created at the phase compensator, which operates to spatially modulate the phase of the image of the fixation target incident thereon to compensate for the aberrations of the eye under examination. It is respectfully pointed out, however, that, as described in Levine, the phase compensated image of the fixation target produced by the phase compensator is created at the pupil of the eye under examination. See column 12, lines 1-7 of

Levine, pointed to by the Examiner. See also column 15, lines 31-48 and column 16, line 65 to column 17, line 15 of Levine.

It is well known in the art that an optical system does not form an image of the input pupil at the focal plane. Thus, if the "phase compensated image of the fixation target produced by the phase compensator is created at the pupil of the eye under examination", as according to Levine, there will be no image of the fixation target on the retina. The patient will see some kind of the Fourier transform of the pupil plane, which will provide him or her with some kind of "view of correction".

By contrast, according to the present invention as recited in clarified amended independent claims 30 and 35, a projector of patterns, jointly with the compensators, projects an image of a test pattern onto the retina. And it is respectfully submitted that Levine clearly does not disclose or suggest this feature of the claimed present invention.

In addition, it is noted that on page 6 of the Office Action the Examiner cited US 2004/0100619 ("Olivier et al") and US 2003/0193647 ("Neal et al") as anticipating the subject matter of the claimed present invention, but did not provide a detailed rejection with respect to these references because "such rejections would have been repetitive". It is respectfully pointed out, however, that Olivier et al does not disclose or suggest an astigmatism compensator. And it is respectfully

submitted that Olivier et al and Neal et al do not disclose or suggest a projector of patterns which, jointly with the compensators, projects an image of a test pattern onto the retina, as according to the claimed present invention.

In view of the foregoing, it is respectfully submitted that clarified amended independent claims 30 and 35, and claims 31-34 and 36-39 respectively depending therefrom, all clearly patentably distinguish over the cited references, taken singly or in combination, under 35 USC 102 as well as under 35 USC 103.

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Entry of this Amendment, allowance of the claims and the passing of this application to issue are respectfully solicited.

If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned for prompt action.

Respectfully submitted,

/Douglas Holtz/

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